

Natural Landmark Brief

1. Site: North Shore Cliffs, Island of Molokai, Hawaii
2. Description: The North Shore Cliffs of East Molokai and the deep amphitheatral valleys extending inland from the shoreline south to the drainage divide comprise one of the great scenic spectacles of its kind in the United States. The underlying rocks of East Molokai are part of a great shield formed during the major episode of volcanism which created the island. Geologists are somewhat perplexed concerning the origin of the North Shore Cliffs which rise 2,000 to 3,600 feet above the surface of the sea. The configuration of the cliffs suggest a fault origin but certain factors indicate no such fault exists. The 27,100-acre landmark site is part of the Molokai Forest Reserve. The site is located along 17 miles of the northeast coast of Molokai Island between the villages of Halawa and Kalaupapa.
3. Owner: Information available indicates that ownership of site lands reposes in about equal amounts in the State of Hawaii and the Murphy Ranch.
4. Proposed by: General Superintendent Robert Barrel, Hawaii Group, National Park Service, Honolulu.
5. Significance: The major episode of volcanism creating Molokai is among the most ancient in the Hawaiian Island chain. There are no finer exposures of these ancient volcanic rocks than along the North Shore Cliffs of this island. These cliffs and adjacent valleys and uplands are scenically majestic and scientifically important. The physical features of Molokai, including the North Shore Cliffs, are considered to be of prime importance to geologists in piecing together the story of how the Hawaiian Islands were formed.
6. Present conditions: The North Shore Cliffs and adjacent valleys and uplands are relatively undisturbed save for occasional very small coastline settlements, some grazing and a limited amount of plantation development. These do negligible harm to the cliffs, valleys and uplands as an illustration of exceptional quality of the major episode of volcanism creating islands of the Hawaiian Archipelago.
7. Special conditions: The population of Molokai is reported to be less than 7,500. However, recreational, resort and economic developments generally are expanding at a fantastic pace in the State of Hawaii and immediate steps toward the preservation and protection of scenic and scientific resources which remain relatively at present should be taken.

*Designated: Dec. 1972*

8. Studied by: Geologist (Consultant) Robert H. Rose, National Park Service during his May 1972 onsite evaluation of potential natural landmarks in the State of Hawaii. Evaluation made on the recommendation of General Superintendent Robert Barrel, Hawaii Group. (See references to Molokai in "Volcanism of the Sea" by Macdonald and Abbott (1971), pages 343-352 and especially the photographs on pages 348 and 349).

September 1972

**sand  
coral**

MOLOKA'AI FOREST RESERVE

PAIL

CHAU  
coral

1:250,000, 1961



...broadleaf evergreen hammock forest and includes rare and endangered species. (May 1976) Owner: State

#### GUAM (4)

**FACPI POINT**—On the southwestern coast of Guam. An illustration of the major episode of volcanism which created Guam Island. (November 1972) Owner: Government of Guam

**FOUHA POINT**—On the southwestern coast of Guam, one mile northwest of the village of Umatac. Contains exposures of volcanic rock with a nearby intertidal platform of two levels of coralline limestone. (November 1972) Owner: Government of Guam

**MOUNT LAMLAM**—Three miles north-northeast of Umatac. Third key site on Guam disclosing the major volcanism which created the island. (November 1972) Owner: Government of Guam

**PUNTAN DOS AMANTES**—Two miles north of Tumon. Illustrates the limestone deposition and subsequent subterranean erosion phases of Guam's geologic history. The area contains a 370-foot high cliff exposure of massive limestone. (November 1972) Owner: Government of Guam

#### HAWAII (7)

##### *Island of Hawaii*

**MAKALAWENA MARSH**—Near Kawikahale Point. One of two remaining ponds in Hawaii that support a resident population of the endangered, nonmigratory Hawaiian stilt, nesting site for the Hawaiian coot, and the only known breeding site of the black-crowned night heron on the Island of Hawaii. (June 1972) Owner: Private

**MAUNA KEA**—25 miles west-northwest of the city of Hilo. Exposed portion of the highest insular mountain in the United States, containing the highest lake in the country and evidence of glaciation above the 11,000-foot level. Most majestic expression of shield volcanism in the Hawaiian Archipelago, if not the world. (November 1972) Owner: State

##### *Island of Maui*

**AO VALLEY**—West of the city of Wailuku. Valley and volcanic rocks on its enclosing slopes illustrate the major episode of volcanism which created the western portion of the island. Amphitheatral in shape due to erosion on the volcanic rocks of a great caldera. (November 1972) Owner: State; Private

**KANAHA POND**—One mile west of Kahului Airport. Most important

of the few remaining brackish-water ecosystems providing refuge for both resident and migratory bird populations. (June 1971) Owner: State

##### *Island of Molokai*

**NORTH SHORE CLIFFS**—Between the villages of Halawa and Kalaupapa. Finest exposures of ancient volcanic rocks resulting from the major episode of volcanism creating Molokai, among the most ancient in the Hawaiian Island chain. (November 1972) owner: State, Private

##### *Island of Oahu*

**\*DIAMOND HEAD**—In the city of Honolulu. One of the best exposed and preserved examples of a typical volcanic cone of altered basaltic glass. Shows the bedding structure of the cone and the character of the rock. (February 1968) Owner: Federal, State

**KOOLAU RANGE PALI**—Three miles south of Kaneohe. The Pali is to the Island of Oahu what the Great Western Divide is to Sequoia National Park. Faulting and stream erosion are among the principal processes which gave the cliffs their configuration. (November 1972) Owner: Private

#### IDAHO (11)

##### *Adams County*

**\*SHEEP ROCK**—Payette National Forest, 35 miles northwest of Council and two miles east of the Snake River. Provides the best view of the horizontally layered lavas that represent successive flows on the Columbia River Basalt Plateau, and an unobstructed view of two contrasting series of volcanic rocks separated by a major unconformity—an important geologic phenomenon. (December 1976) Owner: Federal

##### *Baingham County*

**HELL'S HALF ACRE LAVA FIELD** (extends into Bonneville county)—The center of the site is 20 miles west of Idaho Falls. A complete, young, unweathered, fully exposed pahoehoe lava flow and an outstanding example of pioneer vegetation establishing itself on a lava flow. (January 1976) Owner: Federal, State

##### *Blaine County*

**GREAT RIFT SYSTEM** (extends into Minidoka and Power Counties)—43 miles northwest of Pocatello. As a tensional fracture in the Earth's crust that may extend to the crust-mantle interface. The Great Rift System is unique in North America and has few counter parts in the world. It also illustrates primary vegetation

(April 1968, August 1980) Owner: Federal

##### *Butte County*

**\*BIG SOUTHERN BUTTE**—37 miles northwest of Blackfoot. The view from this butte illustrates the scope and dimensions of Quaternary volcanism in the western United States and the largest area of volcanic rocks of young age in the United States. (January 1976) Owner: Federal

##### *Cassia County*

**CASSIA SILENT CITY OF ROCKS**—16 miles southeast of Oakley. Contains monolithic landforms created by exfoliation processes on exposed massive granite plutons, and the best example of bornhardts in the country. (May 1974) Owner: Federal, State, Private

##### *Elmore County*

**CRATER RINGS**—Two adjacent and symmetrical pit craters that are among the few examples of this type of crater in the continental United States. The pit craters, which are volcanic conduits in which the lava column rises and falls, were formed by explosions followed by collapse. (April 1980) Owner: Federal

##### *Fremont County*

**BIG SPRINGS**—54 miles northeast of Rexburg. The only first magnitude spring in the country which issues forth from rhyolitic lava flows. It is the source of the South Fork of the Henrys Fork River. (August 1980). Owner: Federal

##### *Gooding County*

**NIAGARA SPRINGS**—20 miles west of Twin Falls. The least developed of the large springs discharging into the Snake River from the Snake River Plain aquifer system. It is outstandingly illustrative of the enormous volume of water transmitted through this aquifer. (April 1980) Owner: Private

##### *Jefferson County*

**MENAN BUTTES** (extends into Madison County)—Ten miles west of Rexburg. Contains outstanding examples of glass tuff cones, which are found in only a few places in the world. Their large size and unusual composition make them particularly instructive of an unusual aspect of basaltic volcanism. (April 1980) Owner: Federal, Private.

##### *Shoshone County*

**HOBO CEDAR GROVE BOTANICAL AREA**—12 miles northeast of Clarkia.

# National Natural Landmark Status Report

Name: <u>NORTH SHORE CLIFFS</u>				State: <u>HAWAII</u>		Designated only <input checked="" type="checkbox"/> Registered <input type="checkbox"/>	
Satisfactory <input checked="" type="checkbox"/> Damaged <input type="checkbox"/> Threatened <input type="checkbox"/>		Potential Section 8 <input type="checkbox"/> Potential Section 9 <input type="checkbox"/>		Type _____			
Date: This report <u>06/01/82</u> Last report <u>05/29/80</u> Last site visit <u>07/77</u>							
Date: _____		Visited _____		Telephoned _____		Mail Contacted _____	
Owner(s) _____		Manager(s) _____		5 Ownership since last report _____		Same <input checked="" type="checkbox"/> Changed <input type="checkbox"/>	
_____		_____		Management responsibility since last report _____		Same <input checked="" type="checkbox"/> Changed <input type="checkbox"/>	
_____		<u>05/26/82</u>		6 Site mgmt. plan: Adequate <input checked="" type="checkbox"/> Inadequate <input type="checkbox"/> Changed <input type="checkbox"/> None <input type="checkbox"/> Incomplete <input type="checkbox"/>			
NLL Program Supported		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		7 Site visit: Mode <u>N/A</u>		Time _____ Percent Seen _____	
8 Site land uses: <u>REC., AGR</u>							
9 Adjacent land uses: <u>REC.</u>							
10 Unseen threats		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Boundary problems: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Natural Landmarks brief corrections Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
11 Reporting official <u>EUGENE P. WEHUNT, JR., ASSIST. REGIONAL CHIEF SCIENTIST, WR</u>							
12 Attachments <u>NONE</u>							
13 Follow-up actions		Yes		No		Completed	
This report		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
Last report		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
Special note: _____							
14 Visitor accompanied on site: <u>N/A</u>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
15 Other persons contributed to this report				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

Comments: (use this space, reverse side and additional sheets as necessary; number comments with associated question number.)

#4 & 15. Mr. Gary Barbano, Park Planner, Pacific Area Office, NPS, Honolulu, HA (808) 546-7584 contributed to this report. He contacted Ms. Jean Nishida (Div. of State Parks, Hawaii) who informed him that she was not aware of any changes since the last report.

Mr. Barbano also spoke to Dr. Gordon Bigelow (Dept. of Science, Univ. of Hawaii) who spoke of the presence of a small settlement in the Pelekunu Valley where some small-scale Hawaiian-type agriculture is being practiced. That land use is not considered to be a threat to those geologic values for which the site was designated. In fact, that kind of activity was present at the time of designation.

#10. Brief - see comments from 1980 Sect. 8 Report.